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ABSTRACT

A lesson study initiative was implemented in 25 high schools/learning centers in the Jefferson County, Kentucky, school district. The lesson study initiative is a professional development process in which teachers collaborate to systematically examine their practice and to improve the effectiveness of the experiences they provide to their students. This is done by groups of instructors who teach, critique, revise, and reteach lessons. The end product is a new culture, within which teachers continually build professional knowledge through routine reflection, constant improvement of lessons, and regular measurement of their effectiveness through student results. A participant-oriented evaluation model was used to determine the impact of the lesson study initiative on professional development. Qualitative data were collected using classroom observation. Additional data collected involved critique and feedback sessions, team response forms, and individual response forms. Results indicated that the initiative was popular with the teachers and administrators. The rewards they experienced while participating included opportunities to collaborate with others and applying what was learned to all lesson planning. Respondents concurred that the biggest threats to the lesson study initiative were the cost and time involved in the process. (Contains 16 references.) (Author/SM)

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Running Head: LESSON STUDY

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1

The Perceptions of Teachers and Administrators on the Impact of the Lesson Study Initiative

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Abstract

A lesson study initiative was introduced to 27 high schools/learning centers in the Jefferson County (KY) Public Schools (JCPS) district. It was implemented in 25 high schools/learning centers. The lesson study initiative is a professional development process in which teachers collaborate to systematically examine their practice and to improve the effectiveness of the experiences they provide to their students. This is done by groups of instructors who teach, critique, revise, and reteach lessons. The end product is not a library of refined, final lessons, but a new culture, within which teachers continuously build professional knowledge through routine reflection, constant improvement of lessons, and regular measurement of their effectiveness through student results. A participant-oriented evaluation model was used to determine the impact of the lesson study initiative on professional development. Qualitative data was collected using classroom observations. Additional data collected included critique and feedback sessions, team response forms and individual response forms. Implications for teachers, administrators, policy-makers, and future endeavors are discussed.

The Perceptions of Teachers and Administrators on the Impact of the Lesson Study Initiative

In the United States, teaching is constantly being scrutinized and reforms are made in an attempt to improve teaching. According to some research (Stigler & Hiebert, 1999), the United States is always reforming but not always improving. Teachers try to improve their teaching by conforming to new reform laws, but often fall into the same practices which are most familiar and comfortable. Traditionally, teachers learn to teach through teacher training programs, however; indirectly, they also learn from their lifelong experiences in the classroom. Stigler and Hiebert (1999) state:

> Teaching is a cultural activity. We learn how to teach indirectly, through years of participation in classroom life, and we are largely unaware of some of the most widespread attributes of teaching in our own culture. The fact that teaching is a cultural activity explains why teaching has been so resistant to change. But recognizing the cultural nature of teaching gives us new insights into what we need to do if we wish to improve it. Lesson study is a strategy for change and improvement that is appropriate for a cultural activity such as teaching.

Participation in school-based professional development groups needs to be meaningful in order for improvement to occur. The need for improving instruction is the support for a professional development process known as lesson study.

Lesson study is a long-term professional development process, which improves teaching, that is centered in the classroom and focused on student learning (Boss, 2002). Lesson study began many years ago in Japan and has become the most common form of professional development offered to Japanese teachers. The primary goal in Japan was to replace the lecture delivery with a method that targets student learning through problem-solving. Japanese teachers have succeeded in making a basic change in their approach to teaching. Lewis and

Tsuchida (1998) found they have shifted from "teaching as telling" to "teaching for understanding" through this process known as lesson study. The "research lessons" contain special features that set them apart from an everyday lesson. The lessons are observed by other teachers. They are painstakingly planned, usually in collaboration with other teachers and are focused on a particular goal or vision of education. They are recorded in a variety of ways including videotapes, audiotapes, and student work samples. Lastly, and perhaps most importantly, they are discussed with other teachers, outside educators, and education researchers. According to Sommers (2001), creating a time-out for reflection is essential; reflection is the crucial element that is often missing in school change efforts. "The bottom line is we're not going to get better at our craft if we don't figure out some way to spend time in reflection. It has the potential to change schools," Sommers (2001) said.

Education in the United States does not suffer from a lack of good educational programs or from a lack of good teachers, but rather, from a low demand for good programs. This demand comes when teachers desire to improve their teaching and are given the opportunities to do so (Elmore, 1996; Stigler & Hiebert, 1999). Teachers in the United States are commonly isolated from one another, leaving fewer opportunities for collaboration where it is needed most, among classroom practices. This is in stark contrast to Japanese classrooms. When a phenomenal American teacher retires, almost all the lesson plans and practices that he or she develops also retire. When a phenomenal Japanese teacher retires, he or she leaves a legacy to be expanded by future teachers (Chenoweth, 2000). An American version of lesson study could be the key to transforming schools in the United States. Patsy Wang-Iverson (2002), says "the main contribution that the Japanese form of lesson study offers that is not already in the United States is school-wide professional development that is implemented in a systematic way."

The practice of lesson study in the United States is limited; however, several school

districts across the country are beginning to use this method as a new model for job-embedded professional development. One of the first schools in this country to use lesson study is Paterson (NJ) School Number 2. During the first two years of lesson study, they had a group of 16 volunteers to conduct a lesson study in mathematics. According to Lynn Liptak (2002), the principal of Paterson School 2, the following principles were considered in developing a schedule for lesson study:

> If lesson study is going to become part of the school culture and conducted over a long period with a goal of gradual improvement, then time must be allocated during the school day. Lesson study has no chance of becoming a prevalent feature of the school culture if it is conducted with a few enthusiastic volunteers working after school.

The group met for two hours every week during the school day and soon learned that the two hour weekly meeting was insufficient. Discussions continued within the group before and after school, during lunch, during planning periods, and via e-mail. When teachers are meeting during the school day, according to Liptak (2002), it takes them away from teaching classes. Therefore, lesson study should be scheduled by reallocating existing resources and should not rely on "soft" money or the hiring of substitute teachers. Quality instruction must continue to be provided to students in the classroom while their teachers are working on lesson study (Liptak, 2002). Paterson School 2 uses Title I funding and parity funding to hire non-classroom teachers. Each teacher is paired up with a non-classroom partner teacher. After the second year Paterson School 2 decided to go school-wide with lesson study and anticipate continued improvement in teaching and student learning while expanding the lesson study process.

After reading the book *The Teaching Gap* and learning of the successes of Paterson School 2, the Delaware Department of Education designated lesson study as a Teacher-on-Loan project from 2000 to June 2002. Janice Itzel, the teacher-on-loan, provides the five participating

school districts with an overview of lesson study. In addition, she guides practitioners to lesson study networks, keeps pace with current research, shares that research with schools, builds partnerships among districts, and manages an e-mail list. This state-level assistance enables schools and districts to continue to grow in lesson study (Itzel,2002).

The Bellevue (WA) School District has initiated lesson study as a voluntary activity. Teachers are encouraged to participate by providing professional development time and financial incentives. Lesson study is one of the activities that qualifies for the required 40 supplemental hours each teacher must obtain. Another option is to choose the more traditional district-sponsored workshops. In addition, teachers are eligible to receive $1,000 for each completed lesson, developed through the lesson study process, that is published on the district's curriculum website. Eric McDowell, a Bellevue math specialist, has become a lesson study leader. He applauds the district for providing time for teachers to collaborate with colleagues. He predicts that every year the teachers participate in lesson study, the better they will get at teaching. (Boss, 2002).

The Metropolitan Nashville (TN) Public Schools used a more direct approach in September, 2000, when lesson study was initiated for its entire staff of more than 4,000 teachers. The district replaced five half-days of unstructured planning time with five full days which were devoted to lesson study. Each teacher in the school district was given a copy of the book, *The Teaching Gap*, so that everyone in the district would literally be on the same page (Boss, 2002).

The JCPS district is one of the most recent districts in the United States to initiate a lesson study program. The secondary school principals, in their accountability groups, agreed upon a discipline for the lesson study project. They each selected a teacher from that discipline and an assistant principal in their building to oversee the project. Each teacher and assistant principal read *The Teaching Gap* and the discussions about how to start began in October, 2001.

The district outlined a process that involved teachers working collaboratively to set an overarching goal, plan a lesson, design an open response question and scoring guide, teach the lesson, assign the open response question, reflect and make improvements (on the basis of observations of student learning), and then reteach the lesson with the improvements in place. This process was repeated giving each teacher an opportunity to teach the same lesson. Each of the six lesson study groups videotaped their final lesson.

The time-line, to complete the design and teaching of one lesson, was from November, 2001, to February, 2002. Since all teachers were from different schools, no school time was used in the development of the lessons for this initiative. In order to observe the lessons being taught and critique immediately after, each teacher was provided a substitute for the day. Teachers spent time together after school or on the weekend to refine the lesson and prepare for the next teaching session. Each teacher did receive a $500 stipend for their time spent on this project.

In March, 2002, each group had training using the LessonLab software to see the digitized lesson and make any corrections to the audio and add comments about the lesson and the lesson study process. An immediate goal for the district is to have these six lessons available on the JCPS website, beginning in the 2002-2003 school year, for all teachers in the district to gain insight about this initiative. This lesson study initiative was an attempt to address the isolation that teachers feel. The more frequently educators come into contact with one another through lesson study, the more likely teachers are to observe the strengths of approaches that differ from their own (Lewis & Tsuchida, 1998; Lewis, 2000).

In April, 2002, all school personnel involved in the lesson study initiative celebrated the first year as a success. Early reports indicate that lesson study can become a valuable source of feedback and of new techniques for all teachers. Lesson study embodies many of the principles of effective professional development; it brings to life many of the theories about teacher learning

and change (Wang-Iverson, 2002). The goal of the district is to expand lesson study in each school by providing strong leadership at the highest level. District resource teachers, who are assigned to each school, will become the trail-blazers along with the assistant principals and teachers who already have some experience. The resource teacher will help spread the news, guide the teachers, and sustain lesson study in each school. The hope at the district level is that lesson study truly *become* job-embedded professional development.

The purpose of this collaborative action research was to conduct a qualitative study on the impact of the JCPS lesson study initiative as it relates to job-embedded professional development. This initiative is a key mechanism for meaningful professional development. Long term results of this may include improved student achievement, deeper levels of understanding, and teachers who feel less isolated and more skilled at collaborating with colleagues (Boss, 2002). Improvement in teaching cannot be achieved until teachers are afforded the opportunities to participate in meaningful job-embedded professional development.

Method

Participants

The JCPS district is the 26th largest school district in the United States with more than 95,000 students in Kindergarten through 12th Grade. There are 86 elementary schools, 23 middle schools, 20 high schools and 23 learning centers in the JCPS district. This action research involved five high schools in the district grouped together based on similar characteristics. Four of the five schools have more than 40% of the student population on free/reduced lunch while the other has 27%. The mobility rate of the students for all five schools range from 9.8% to 15.5%. The percent of Exceptional Education students in the five schools range from 9.8 to 15.6. The number of students living in a single parent household ranges from 53.3% to 64.8%. The annual percentage rate of attendance ranges from 86.8 to 93.1.

Each of the five schools selected an Algebra I teacher (all female) and an assistant principal (two female and three male) to participate in the lesson study initiative. There is a wide variety of teaching experience that ranges from a first year teacher to one who has been in the classroom for 21 years. Each has a Masters Degree with two having completed a Rank I. All have certification in Mathematics and four teachers hold other areas of certification. The educational experience of the administrators in the group ranges from nine years to 34 years. All have a Masters Degree and two have completed a Rank I or higher. Areas of certification are diverse covering a wide range of disciplines and all levels of K-12 education.

Instrumentation

Observations of the teachers and their classrooms provided the primary source of information for this study, with additional information coming from documents related to the lesson study initiative (see appendix A, B, C, and D). Each observation was approximately 55 minutes long and followed a structured lesson plan but also allowed for individual teaching styles to match the students' learning styles. After each lesson, a critique and feedback session allowed the opportunity to collect detailed notes about the instructional activities, teacher-student interactions, and the use of the instructional lesson plan. The documents used for the critique and feedback session were provided by the JCPS central office. This document helped structure the critique and feedback session, as well as provide information for adjustments to the lesson and an opportunity for the teacher to do a self analysis.

The documents used to critique the lesson study initiative, both individually and as a team were also provided by the JCPS central office. These documents used a structured format to direct teacher and administrator responses toward the topic of interest. The individual response form asked for implications of lesson study on instructional practices, possibilities or recommendations for individual schools, as well as, the district regarding job-embedded

professional development. The team response form required team members to brainstorm about the process and barriers of lesson study. In addition, team members were asked to critique the LessonLab software and the implications for future use.

Data Collection and Analysis

Multiple methods for gathering the qualitative data included observations, critique and feedback sessions, and individual and team response forms. The primary source of data consisted of the observations. During each of the five observations, field notes were taken to document such factors as the nature of student-teacher interactions, student responses, and problem areas encountered during the lesson. A secondary source of data consisted of information gained through the critique and feedback sessions that immediately followed each lesson. At the conclusion of the lesson study, information was obtained from response forms submitted by each individual and the team. Videotapes from the planning sessions, the lessons, and the critique and feedback sessions were also used to acquire additional information which provided validity to the research. Data collection and analysis occurred together and this process continued throughout the lesson study initiative.

The ongoing analysis influenced the direction of the subsequent observations, interviews, and document collection. Triangulation of findings was achieved by using multiple data collection methods, as well as individual and team responses from the other 40 participants in the lesson study initiative. Coding processes included identifying concepts embedded within the data, organizing distinct concepts into categories, and linking them into broad explanatory strands (Strauss, 1987; Strauss & Corbin, 1990). The emerging categories presented below served as the process through which the observations, field notes, critique and feedback forms, and the response forms were examined. Data were coded into categories related to the impact on teachers, administrators, and district policy-makers.

Findings

Upon completion of the research, three distinct strands were found: (1) the impact of lesson study on teachers, (2) the impact of lesson study on administrators, and (3) the impact of lesson study on the district. The lesson study impact on teachers was sub-categorized into (a) instructional practices, (b) instructional planning, and (c) assessment. The lesson study impact on administrators focused on professional development activities.

One of the primary findings of the lesson study initiative is that teachers and administrators are enthusiastic about the opportunity to direct their own professional development as it relates to their personal growth. Participants stated that the lesson study initiative stimulated their desire to become a more effective teacher or administrator. One teacher stated,

> It is necessary for teachers to think critically about what they do and how they teach a lesson. Working collaboratively with my group gave me the opportunity to share my ideas without fear, as well as, get ideas from those more experienced than myself.

Lesson Study Impact on Teachers

Teachers cited many benefits of the lesson study initiative in terms of instructional practices, instructional planning, and assessment. In terms of instructional practices, all of the teachers agreed that the opportunity to observe other colleagues teaching the same lesson in their own classroom was invaluable. One teacher responded: "the lesson study process has made me more aware of a number of instructional strategies that I learned by watching the other teachers. For instance, I learned classroom management techniques and observed interesting classroom displays for illustrating mathematical concepts."

The teachers were very specific about the role the lesson study initiative played in their own professional development relative to instructional practices. They agreed it was the little

things that made the biggest impact. According to one teacher, "I never would have thought to use arrows to illustrate what the slope of an equation means in terms of rise and run before I observed the lesson being taught by another member of our group." Another "aha" was the use of a clear hanging shoe rack used to store calculators on the wall inside the classroom. The comments from the observers also helped teachers realize things about their teaching that they themselves could not see; for example, talking too fast. Most often, according to Lewis & Tsuchida (1998), the comments of the lesson study research lesson take on the form of tips and suggestions .

In terms of instructional planning, most teachers agreed the lesson study initiative has changed their thinking process when planning lessons. One teacher responded:

> I now routinely begin any unit planning with an overarching theme and goal. Then I compose the assessment. THEN I plan the lesson or lessons. It now seems to be the obvious, natural way to approach teaching. This represents a paradigm shift for me.

Other teachers gained confidence in current practices. For example, another teacher responded:

> In many ways it validated what I had been doing and yet it also gave me a clearer vision of what I needed to change. It was interesting to be able to view the response of the students to the individual components of the lesson. This is very difficult to achieve without the benefit of the observers or the video-taped lesson.

Teachers agreed that the process of planning a lesson with other teachers was wonderful. Each teacher made various contributions to the lesson. Working collectively enhanced the lesson more than working alone. One teacher said it best: "the single greatest thing I realized from this project is that I don't have to teach in isolation and that planning and delivering a lesson is a lot more fun and productive when a team of teachers is involved in the process."

In terms of assessment, teachers are experiencing benefits in student assessment and

perhaps more importantly, self assessment. During the lesson study process, the primary goal of the teachers was to recognize barriers to student learning and remove or minimize them in the revised lesson. This made teachers focus more on student responses to gauge the level of student success. Another goal of the teachers was to utilize strategies that maximize student outcomes as measured through authentic assessment via the open response question. One teacher realized: "I'm too much of a helper. I learned to stand back and allow the students to wrestle with an issue. And then, if help truly is needed, ask questions that lead them to their own discovery." Participation in the lesson study initiative required teachers to reflect and assess their own teaching. Teachers began to realize the importance of "fine tuning" the lesson immediately after teaching it. Details of the lesson are often forgotten if not clarified quickly. One teacher commented:

> Prior to my involvement in the lesson study process, I would teach a lesson, think about needed improvements, and then move on to the next lesson. Consequently, when I teach the lesson the next year, I often have to learn the same lesson over again (how it can be improved). The lesson study process showed me the benefits of reflecting and making changes immediately after the lesson.

Lesson Study Impact on Administrators

Administrators in the lesson study initiative believe they have an important role in its success. The traditional role of the administrator, as authoritarian, does not work well in the context of lesson study. Rather, they must lay the groundwork at the school level to provide professional development time, funding for release time, as well as, funding for personal time spent planning, and training. Supportive administrators are essential; however, one administrator said, "the lesson study initiative will not continue without the interest, commitment, and hard work of the teachers." Administrators must be amenable to teachers taking the lead; teachers

must be the leaders of their own instructional improvements (Boss, 2002). "Being willing to move from a dictating style to one of supporting teachers is a change that administrators must be willing to embrace," added an administrator.

Strengths of the lesson study initiative, according to the administrators in the group, are improving instruction through a conscious effort to know and teach to different students' learning styles, building collegiality, horizontal teaming, and learning new teaching techniques/methods from each other. The administrators also shared what they considered to be the greatest weakness of the initiative which was the time commitment. One weakness expressed was the complexity of the lesson study process when there are large numbers of students with serious educational deficiencies. Several opportunities were apparent to the administrators who participated in the lesson study. All were excited by the opportunity teachers had to perfect their techniques and learn new strategies. These techniques and strategies could then be transferred to all lessons that they teach to improve the end product of student achievement. Another opportunity provided the administrator to be an instructional leader; to work closely with a group of teachers to be the facilitator, the cheerleader, the teacher, and then to see the improvement of each lesson because of the hard work of the teachers. This hard work yielded improvements in the classroom; it helped the teachers be more deliberate.

The administrators can see the need for professional development that is based on classroom instruction and classroom teachers. Having peers observe, provide critical feedback, and share ideas is a step closer to better learners, engaged students, better test results, and better teachers (Boss, 2002). Although most comments were positive concerning lesson study in relation to job-embedded professional development, it must be noted that some administrators believe the threat to the lesson study initiative is the feeling of "exposure" that teachers have because of the involvement of other teachers in the lesson planning and then in the classroom.

According to a recent study (Garet, Porter, Desimone, Birman, Yoon, 2001), some aspects of teacher professional development emerged as extremely important to teacher learning: (1) the form of professional development (PD), (2) the duration of the PD, (3) collective participation in PD, (4) the content of PD, (5) the active learning in PD, and (6) the coherence of PD. The more effective form of professional development is teacher networks or study groups as opposed to the traditional classes and workshops. Sustained and intensive programs are more likely to make an impact than shorter professional development programs and activities. Those that are designed for teachers who work together in the same school, grade, or subjects are the best. Active learning is fostered through strategies such as observing and being observed teaching, planning classroom implementation, presenting, and writing. Teachers must perceive professional development as part of other coherent teacher learning programs that reflect activities at their school. The researchers found that most current teacher professional development offerings lack these six features.

The task for administrators, then, is to provide opportunities for professional development that have these important features. This would be challenging and require a considerable amount of time and planning, as well as expense. It is estimated that the average cost of high-quality professional development experiences is $512 per teacher (Garet et al. 2001). Therefore, districts must be willing to commit professional development funds to individual schools to plan and implement their own activities and only offer a minimal number of traditional forms of professional development at the district level.

Discussion

The lesson study initiative in JCPS has many similarities with other districts implementing lesson study across the United States. JCPS compares to Paterson (NJ) School 2 and the Bellevue (WA) School District in that volunteers were sought to participate. This is in

stark contrast to the Metropolitan Nashville (TN) Public Schools who implemented lesson study district-wide with all teachers. Like Nashville, JCPS initiated lesson study district-wide but not with all teachers. Similarly, five school districts within the state of Delaware have initiated lesson study district-wide.

Most districts, when implementing lesson study, provided time within the school day for teachers to participate in the lesson study process. JCPS, on the other hand, provided a workshop for participants during one school day; however, all planning and revisions were done outside of the normal school day. One additional school day was provided for participants to learn the LessonLab software. Most findings in the literature review indicated that many districts throughout the country introduced lesson study in math and/or science (Wang-Iverson, 2002). Like Japan, JCPS included all disciplines in their lesson study initiative. It remains to be seen if this has an impact on the success of the JCPS program.

The findings of our research indicate that the lesson study initiative is popular with the teachers and administrators in the participating schools. This initiative has been an overwhelmingly positive experience. It is evident from the teachers and administrators that this is an ongoing process. The rewards experienced while participating in lesson study include the opportunity to collaborate with others and applying what was learned to all lesson planning. Lesson study challenges teachers to think more deeply and look more closely at student learning. (Buckwalter, 2002).

In general, teachers concurred that the biggest weaknesses/threats to the lesson study initiative are the cost and time involved in the process. The funding for released time, the use of substitutes to cover classes when teachers are observing one another's lessons, the amount of teaching lost as a result of the teacher being out of their own classroom, and the time it takes outside of the normal school day are all concerns of the participants. The funding for release time

could be creatively reallocated from existing resources such as professional development funds (Liptak, 2002). New funds may also be acquired through grants and awards offered from a variety of sources throughout the country. To address the concern of lost teaching time and the time spent outside the normal school day, JCPS should add days to the school year to allow for early student dismissal one day a week. This parallels the effort made by the Bellevue (WA) School District which requires teachers to spend that time working with lesson study or some alternative professional development. In addition, time spent in the lesson study process should count toward the professional development hours mandated by the school district. (Oxrieder, 2002; Zuber, 2002).

This research supports the opinion that administrators and policy-makers must refocus professional development efforts. According to Liptak (2002),

> For too long, professional development time has been allocated to outside experts to "train" teachers rather than given to teachers to reflect collaboratively on their practice. We need to tap outside expertise; we need to improve our content and pedagogical knowledge. But the professional development process needs to occur in the context of our classrooms and be driven as an on-going activity by professional practitioners.

Changes in the day-to-day teaching of mathematics was evident when a relationship was found between the job and the professional development. However, because the lesson study initiative requires so much time and commitment from the teachers involved, it is not something you want to force or coerce people into.

The effectiveness of the lesson study initiative is related to developing collaborative schools within the JCPS district. Collaboration among professionals must be utilized to achieve maximum results which may include increased student improvement, deeper levels of understanding, and teachers who feel less isolated and more skilled at collaborating with others

(Boss, 2002).

Further research is needed to improve our understanding of the impact of the lesson study initiative in terms of job-embedded professional development. LessonLab software or similar technology may be an alternative means of achieving observations of lessons taught by others without having to release teachers from their own classrooms. The critique and feedback sessions should occur during JCPS district "Gold" days or as flexible professional development days. A percentage of the professional development funds made available to each school in the district should be used to continue collaborative models of the lesson study initiative. All of these opportunities may not be enough. JCPS should consider a year round school calender to provide time for lesson study.

Our lesson study group intends to continue to work together during the 2002-2003 school year to further improve upon the lesson we created. Next year, we hope to reteach the lesson using "student discovery" methods versus "teaching as telling" methods. Our lesson is not a one time lesson. We look forward to the opportunity to continue consulting with one another in an attempt to improve student learning and retention.

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LESSON STUDY

Critique & Feedback

Course:_____ Lesson Topic:_____ Date: _____
Number of times taught (including this one): _____
Percent Proficient or higher: Black = _____% Other = _____%

WARM FEEDBACK:

COOL FEEDBACK:

ADJUSTMENT(S) TO MAKE:

REFLECTION (self-analysis):

TEAM RESPONSES:

PROCESS: How did this process of working as a Lesson Study Group help you develop and improve the lesson?

BARRIERS: What were your primary struggles or difficulties?

LESSONLAB: How did the web-based video contribute to your lesson study process?

INDIVIDUAL RESPONSE:

(for each teacher)

IMPLICATIONS

*How did the lesson study process change your thinking about your own instructional practices?

*What are some possibilities or recommendations for **your school** regarding this Lesson Study process or some type of job-embedded professional development?

*What are some possibilities or recommendations for our **district**?

INDIVIDUAL RESPONSE:

(for assistant principals)

IMPLICATIONS

*How did the lesson study process change your thinking about teachers' instructional practices?

*What are some possibilities or recommendations for **your school** regarding this Lesson Study process or some type of job-embedded professional development?

*What are some possibilities or recommendations for our **district**?

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